

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.(Previously presented) Polycrystalline alumina components optionally containing MgO in a concentration of at most 0.3 wt-%, wherein the alumina contains a concentration from 0.1 to 0.5 wt-% inclusive ZrO₂ as an additive and has an average crystal size $\leq 2 \mu\text{m}$, a relative density higher than 99.95%, with a real in-line transmission $\text{RIT} \geq 30\%$ measured over an angular aperture of at most 0.5° at a sample thickness of 0.8 mm and with a monochromatic wavelength of light λ , and wherein the ZrO₂ additive has an average particle size of at most 100 nm.

2.(Currently amended) The polycrystalline alumina components according to claim 1, ~~the~~ wherein the average crystal size is $\leq 1 \mu\text{m}$ and the real in-line transmission RIT is at least 40%.

3.(Previously presented) The polycrystalline alumina components according to claim 1, wherein the ZrO₂ additive is in a concentration from 0.1 wt-% to 0.3 wt-%, inclusive.

4. (Previously presented) A discharge lamp comprising a discharge tube having a wall of a ceramic as claimed in claim 1.

5.(Previously presented) The discharge lamp according to claim 4 wherein the discharge tube has an ionisable filling containing a metal halide.

Claims 6- 10 (Canceled)

11.(Previously presented) Polycrystalline alumina components comprising alumina which contains ZrO_2 in a concentration between 0.1 to 0.5wt-% inclusive as an additive, wherein the alumina has an average crystal size $\leq 2 \mu\text{m}$, and has a relative density higher than 99.95%, and wherein the additive has an average particle size of at most 100 nm.

12.(Currently amended) The ~~P~~polycrystalline alumina components of claim 11, wherein the alumina contains MgO in a concentration of at most 0.3 wt-%.

13.(Previously presented) A discharge lamp comprising a discharge tube having a wall of a ceramic as claimed in claim 11.

Claim 14 (Canceled)

15.(Currently amended) The ~~P~~polycrystalline alumina components of claim 11, wherein transparency of the alumina is at least 30% having a real in-line transmission $\text{RIT} \geq 30\%$ measured

over an angular aperture of at most 0.5° at a sample thickness of 0.8 mm and with a monochromatic wavelength of light λ .

16.(Currently amended) The polycrystalline alumina components of claim 11, ~~wherein the~~
having a real in-line transmission RIT is based on a following relationship:

$$RIT = (1 - R) \exp\left(-\frac{3\pi^2 G d \Delta n^2}{2\lambda_0^2}\right)$$

where

R is a coefficient of surface reflection,

d is the sample thickness,

G is the average crystal size,

Δn is an effective birefringence of alpha-alumina calculated as a weighted average of
refractive index differences between each of main optical axes, and

λ_0 is the monochromatic wavelength of the light in vacuum.